

Date: Wed, 9 Jun 93 18:36:32 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #706  
To: Info-Hams

Info-Hams Digest                      Wed, 9 Jun 93                      Volume 93 : Issue 706

Today's Topics:

Air-band radio question  
Any comments on Yeasu DVS-3 Voice Recorder?  
Attention: Pilots Who Are Ham Operators  
BNC connectors  
computers/printer/software/ham gear  
DSP algorithm for audio inversion  
FT-530 HT coverage expansion mods needed  
Ham Radios in movies  
QSLs to Russia and CIS  
R7 vs. AP8A  
Recommendations for Miscrosat antenna systems  
Timex 1000 & Packet

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.  
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Date: Wed, 9 Jun 1993 23:09:19 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!sgiblab!a2i!  
davidj@network.UCSD.EDU  
Subject: Air-band radio question  
To: info-hams@ucsd.edu

In <1v3019INNdqC@rave.larc.nasa.gov> kludge@grissom.larc.nasa.gov (Scott Dorsey)  
writes, as part of a long and tedious thread (doesn't \_anyone\_ else have a  
copy of the FCC Rules? :

>>aviation band without authorization. You have to have a Class-D restricted

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>>radiotelephone operators permit, and a current station license; use in an
      ^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
      not anymore see 87.89d4      you betcha
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>>aircraft is covered by the aircraft's license, and use on the ground is  
>>covered by the station license of the ground facility. Also, you must be

use of a handheld near the aircraft to operate in place of the aircraft's own radio is also covered by the aircraft's station license

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>>engaged in legitimate flight, or flight-related activities; even with a license,
>you can't just chat with your buddy. If your illegal use of
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Yes you can, see 87.237

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>It sounds like he does indeed have a legitimate flight-related reason to
>transmit, in that he needs to provide information to the fellow in flight.
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The wording is "...must pertain to activities of a temporary, seasonal or emergency nature involving aircraft in flight. Communications are limited to directing or coordinating ground activities from the air or aerial activities from the ground."

He can apply for an aeronautical multicom license, it's \$35 and is good for 5 years. 122.85, 122.90 are normally assigned, and/or 122.925 if the applicant is a governmental entity.

>He needs the restricted radiotelephone permit. If he's got a First Class  
>or the General Radiotelephone, that will do, otherwise it's a matter of  
>filling out the yellow tag and mailing it with \$35 to the FCC. No big  
>deal there.

No. 87.89d4: "No operator license is required to ... operate a VHF telephony transmitter providing domestic service or used on domestic flights."

>I don't know about the legitimacy of the station license, though. I know  
>that aircraft are required to have station licenses, as are airports. And,  
>I know that I have seen folks using airband HTs at airshows from the ground,  
>to direct aircraft. I've seen folks using them from the ground at the local  
>airport as well, since the airport has no tower and no communications facility.  
>(No paved runway, either.) This one is worth asking the FCC about.

You could look it up, local library, 47 CFR Part 87.

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>--scott
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>Incidentally, a friend of mine is a pilot and a ham.  She wants an air band
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>HT which is legal and type-accepted for aviation use, but which can also  
>be used on the ham bands. Obviously, 2M FM is preferred, although 2M AM  
>might even do the trick. Anyone with a Heathkit Lunchbox need a SKED?

Icom IC-A2. Goes to about 150 MHz AM.

--

David Josephson <david@josephson.com>

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Date: 9 Jun 93 16:02:08 GMT  
From: rocksanne!aladdin!chen@cs.rochester.edu  
Subject: Any comments on Yeasu DVS-3 Voice Recorder?  
To: info-hams@ucsd.edu

Hi, anyone use the Yeasu DVS-3 Voice Recorder for the FT5200? Is it like an  
answering service? Can you control remotely and play back what it's recorded?

Thanks,  
Dan

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Date: 9 Jun 93 16:16:16 EDT  
From: usc!howland.reston.ans.net!europa.eng.gtefsd.com!tsg.com!rpi!  
news.crd.ge.com!sunblossom!knight.vf.ge.com!news.ge.com!psinntp!psinntp!  
arrl.org@network.UCSD.EDU  
Subject: Attention: Pilots Who Are Ham Operators  
To: info-hams@ucsd.edu

I just borrowed a book from the library called "The  
Road To Kitty Hawk," by Valerie Moolman, published  
by Time-Life Books in the 1980s.

On pages 66-69 you'll find text and photos of an  
experimental "airplane" built by Sir Hiram Maxim,  
father of Hiram Percy Maxim, co-founder of ARRL.  
Maxim the Elder apparently subscribed to what I  
call the "Harley Davidson" approach to design:  
If big is good, bigger is better! Fortunately  
for anyone who lived nearby, the thing never got  
far off the ground. By the way, it used steam  
power!

73,

--  
jkearman@arrl.org

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-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
I love storms, tornados, hurricanes, earthquakes etc.  They are Mother Nature's
way of reminding us that She could kick our butts      a n y t i m e !!
#include std_disclaimer.h ||||||| N2RVJ ||||||| chhibber@andromeda.rutgers.edu
```

Now I'm off to take my tranquiliser(s) :-)

andyw. NØREN/G1XRL

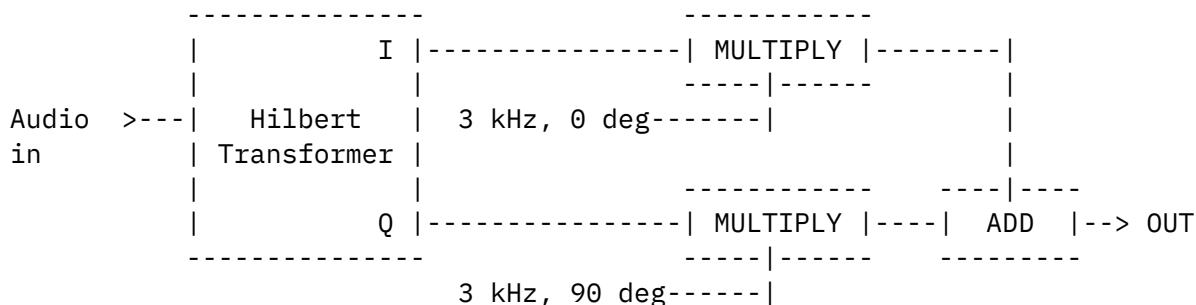
andyw@aspen.cray.com Andy Warner, Cray Research, Inc. (612) 683-5835

-----  
Date: 9 Jun 93 12:59:36 EDT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!  
ux1.cso.uiuc.edu!uwm.edu!rpi!news.crd.ge.com!sunblossom!knight.vf.ge.com!  
news.ge.com!psinntp!psinntp!arrrl.org@network.  
Subject: DSP algorithm for audio inversion  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, cclark@cruzio.santa-cruz.ca.us writes:

>  
>I'm looking for an algorithm to implement speech inversion (i.e., baseband  
>audio conversion of sidebands about a carrier frequency of 3000 hz) with  
>an HC16 DSP core. I've seen this done with the TMS320 32 bit core. Is the  
>Motorola contest board with PCM56 DAC capable of this encode/decode function?

I don't claim this is the only way--or even the best way--but I've  
done it and it works. It should be well within the capabilities of  
the HC16.



The Hilbert transformer is an FIR "all-pass" filter that produces an output (Q) that is the input delayed by  $(N-1)/2 + 90$  degrees. (Actually, the filter is a bandpass that passes nearly all of the range 0 to  $0.5F$ , where  $F$  is the sampling frequency. How close it comes to "nearly all" is determined by the length--the number of taps--of the filter.) The I output is simply a delayed, 0-degree signal taken from the  $(N-1)/2$  tap of the filter. (Obviously, the filter should have an odd number of taps.)

In DSP, all of the signals are discrete-time (sampled) signals. The 3-kHz signals would be:

0 deg:  $\sin(2\pi \cdot 3000 \cdot k \cdot T)$   
90 deg:  $\cos(2\pi \cdot 3000 \cdot k \cdot T)$

Where T is the sample period ( $=1/F$ ), and k is the sample index. The blocks labeled MULTIPLY multiply each successive sample out of the filter by the corresponding 3-kHz sample. Each pair of samples coming out of the multipliers are added to produce the output.

You can do some optimization. For one thing, since the Hilbert transformer is designed as a half-band FIR filter, every other coefficient is zero, eliminating half of your multiplications within the filter. Also, the filter is by definition antisymmetrical:

$h(N-1) = -h(0)$   
 $h(N-2) = -h(1)$   
 $h(N-3) = -h(2)$

...

which would allow you to halve the multiplications yet again. (This may not be an improvement if you're doing this on a DSP chip, since the contorted program structure may not be worth the savings on a chip which is optimized for successive multiply-accumulate operations.)

Most any DSP filter program (such as PC-DSP) can design the Hilbert transformer coefficients. If you don't have a program available, email me and I'll run off a filter design.

By the way, if you're inverting the output of a receiver, and if the receiver's audio frequency response isn't flat, the frequency response will be inverted as well! So listening to the "straight" audio on, say, USB, may sound different from switching the receiver to LSB and listening to the inverted audio.

-----  
Jon Bloom, KE3Z | jbbloom@arrl.org  
American Radio Relay League |  
225 Main St., Newington CT 06111 |

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Date: 09 Jun 93 18:57:05 GMT  
From: microsoft!hexnut!frede@uunet.uu.net  
Subject: FT-530 HT coverage expansion mods needed  
To: info-hams@ucsd.edu

Carefully open the radio by removing the screws holding the case together as well as the four tiny screws on the battery connector slide. Split the radio apart and remove the cardboard from the front side of the radio. NOTE HOW THE LITTLE METAL TAB STICKS THROUGH THE CARDBOARD FOR PROPER REASSEMBLY!!!!

Locate the solder jumper pad near the bottom of the radio (there are some numbers on it).

You can do one of two mods -- the receive only or the receive transmit.

Either mod will give you extended receive from 108 to 174, 350 to 500, and 800 to 912.

The transmit mod enables about 130-170 and 420 to 465 (about).

Remove ONLY solder pad 13 to enable both extended receive and transmit.  
Remove ONLY solder pad 15 to enable the extended receive only.

Make sure to use a VERY low wattage solder iron and sucker. I used the \$8.95 Radio Shack solder remover (like a soldering iron with a sucker bulb) with great success. DO NOT USE DE-SOLDERING WICK!!!!

-----  
Date: 9 Jun 93 12:11:27 EDT  
From: overload.lbl.gov!agate!usenet.ins.cwru.edu!howland.reston.ans.net!  
ux1.cso.uiuc.edu!sdd.hp.com!saimiri.prima.wisc.edu!news.crd.ge.com!sunblossom!  
knight.vf.ge.com!@dog.ee.lbl.gov  
Subject: Ham Radios in movies  
To: info-hams@ucsd.edu

In rec.radio.amateur.misc, dave@llondel.demon.co.uk (David Hough) writes:  
>On a slightly different note, has anyone tried reading the morse in some of  
>the old war films? It is surprising how much of it is \*real\* morse and has  
>some relevance to what it is claimed to be.

Yeah, but the operator always seems to be "reading" 3 words ahead  
of what's being sent! (Maybe he's going for Worked All ESP.)

-----  
Jon Bloom, KE3Z | jbbloom@arrl.org  
American Radio Relay League |  
225 Main St., Newington CT 06111 |

-----  
Date: Wed, 9 Jun 1993 22:37:11 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!sol.ctr.columbia.edu!  
sbpub1!vassili@network.UCSD.EDU  
Subject: QSLs to Russia and CIS

To: info-hams@ucsd.edu

: Apparently, the situation in Armenia (ex-UG6 land) has gotten even WORSE  
: than it had been. Airmail, which used to be fairly cheap, even recently,  
: has skyrocketed in cost. It cost 90 rubles to send me this card, which  
: is apparently a BIG chunk of money. Apparently, it used to cost 5 rubles,  
Situation in Armenia is REALLY bad, BUT 90 rubles is NOT a big amount  
now (at least in Moscow). According to the yesterday's rate is's about  
10 cents (\$0.1) and though average income is much lower then in the US  
it still can be estimated as \$1-\$3 in the US - which is quite resonable  
price for the air mail from the war zone... The main question is of course  
if the mail will still get US safely. (Though Armenia may be quite different -  
I suppose not that different).

Vassili Leonov  
CS SUNYSB

-----  
Date: 9 Jun 1993 17:55:34 -0500  
From: swrinde!cs.utexas.edu!tamsun.tamu.edu!tamsun.tamu.edu!not-for-  
mail@network.UCSD.EDU  
Subject: R7 vs. AP8A  
To: info-hams@ucsd.edu

Does anyone have any opinions as to the effectiveness of the Cushcraft AP8A  
multiband vertical? I would especially like to know how it compares to the  
R7, which I already know is excellent but also costs twice as much.

Thanks a lot,  
Brandon AB5LV

-----  
Date: 09 Jun 93 20:03:52 GMT  
From: microsoft!wingnut!davidar@uunet.uu.net  
Subject: Recommendations for Miscrosat antenna systems  
To: info-hams@ucsd.edu

Comments on dual-band vs. 2m/70cm separates for working the Microsats.  
I have the Ringo Ranger ARX-2B and was thinking of getting a 450mhz  
vertical, however, the gain for the ARX-2B and ARX-450B is 7db. The  
Cushcraft ARX-270 has a gain of 9db for 2m and 12db for 70cm. I  
would rather just have one tri-bander vs. 2 separate verticals. My  
rig doesn't have a built in duplexer.

Comments?



I appreciate any help here, thanks in advance.

73

Dave Arnold (KD6IFY)  
davidar@microsoft.com

-----  
Date: 9 Jun 93 13:11:40 EDT  
From: elroy.jpl.nasa.gov!swrinde!cs.utexas.edu!uwm.edu!rpi!news.crd.ge.com!  
sunblossom!knight.vf.ge.com!news.ge.com!psinntp!psinntp!arrl.org@ames.arpa  
Subject: Timex 1000 & Packet  
To: info-hams@ucsd.edu

I just pulled from storage an old Timex 1000 (still works,  
too.) I'd like to use it for Packet (if possible.)

Does anyone know of a BASIC "dumb terminal" program for  
this Timex and whether the Timex ever had an RS-232C  
converter?

Thanks!

Joe, NJ1Q

Joseph Carcia, NJ1Q	"The surest sign that Intelligent
ARRL Outgoing QSL Service Mgr.	life exists in the Universe is
American Radio Relay League	that NONE of it has ever visited
225 Main St.	the Earth." - Calvin & Hobbs
Newington CT 06111-9965	
(w) (203) 666-1541 ext. 274	
(fax) (203) 665-7531	
internet: jcarcia@arrl.org	

-----  
Date: 9 Jun 1993 22:50:24 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!  
usenet.ins.cwru.edu!cleveland.Freenet.Edu!aa813@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <1993Jun8.155428.12876@peavax.mlo.dec.com>,  
<739590295snx@llondel.demon.co.uk>, <2C1580B3.26758@ics.uci.edu>p  
Reply-To : aa813@cleveland.Freenet.Edu (Joseph B. Swartz)  
Subject : Re: Ham Radios in movies

>  
>>On a slightly different note, has anyone tried reading the morse in some of  
>>the old war films? It is surprising how much of it is \*real\* morse and has  
>>some relevance to what it is claimed to be.  
>

Check out A NIGHT TO REMEMBER, the 1958 British version on the Titanic sinking. The CW is authentic including the "old" distress signal of "CQD" and the "new" one, in 1912 of "SOS."

73, N8IPC

-----  
Date: 9 Jun 1993 17:56:21 GMT  
From: topaz.bds.com!topaz.bds.com!ron@uunet.uu.net  
To: info-hams@ucsd.edu

References <9306080520.AA06729@ucsd.edu>,  
<1993Jun8.155428.12876@peavax.mlo.dec.com>, <739590295snx@llondel.demon.co.uk>  
Subject : Re: Ham Radios in movies

Yeah, sometimes it's real sometimes it's not. Sometimes it's not even Morse, just random beeps. Sometimes it's gibberish. Usually, they don't let you hear enough of it (I love the paragraphs of information that some movie operators get from listening to about twenty morse characters).

-Ron

-----  
Date: Wed, 9 Jun 1993 21:11:59 GMT  
From: mvb.saic.com!unogate!news.service.uci.edu!usc!howland.reston.ans.net!  
noc.near.net!lynx!random.ccs.northeastern.edu!bungles@network.UCSD.EDU  
To: info-hams@ucsd.edu

References <1993Jun08.221235.18468@news.mentorg.com>,  
<1993Jun8.234634.29588@random.ccs.northeastern.edu>,  
<1993Jun9.134142.586@rsg1.er.usgs.gov>bu  
Subject : Re: ICOM IC-2SRA Mods...

In article <1993Jun9.134142.586@rsg1.er.usgs.gov> tbodoh@resdgs1.er.usgs.gov (Tom Bodoh) writes:  
>In article <1993Jun8.234634.29588@random.ccs.northeastern.edu>,  
bungles@ccs.northeastern.edu (Michael S. Pappalardo) writes:  
>|> Does anyone have any mods for the Icom IC-2SRA? maybe something that allows

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>|> tx on the 29-906 MHz...
>|>
>|>
>
>--
>I didn't notice a smiley :-) after your question on wideband xmit...while
>there most likely is a mod that opens up xmit on the SRA, it probably will
>only open it up to 160 or 170 Mhz. For a radio to have 29-906 Mhz xmit, it
>would need to be tremendously large in order to house all of the necessary
>circuitry. I don't think that the FCC would approve such a radio. The
>closest you might come is the ICOM 901, which you can add several band units
>including 6M, 2M, 220, 70CM, 1270 and a wideband receiver. Bye...
>
>+++++
>+ Tom Bodoh - Sr. systems software engineer
>+
>+ USGS/EROS Data Center, Sioux Falls, SD, USA 57198 (605) 594-6830 +
>+ Internet; bodoh@dgg.cr.usgs.gov (152.61.192.66)
>+
>+ "Welcome back my friends to the show that never ends!" EL&P
>+
>+++++

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Heheh sorry ;-)

I know the FCC wouldn't like a 2m such as the IC-2SRA to have such capabilities, but a friend of mine modified a Alinco 580 that transmits somewhere between 29 - 900 excluding 800's...

Is there a service manual for the Icom IC-2SRA which gives you various hidden features...like combinations of keys perform different functions?  
I haven't bought this radio yet, just doing a little pre-shopping...

Michael

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Date: Wed, 9 Jun 1993 22:34:38 GMT
From: spsgate!mogate!newsgate!zoom.sps.mot.com!user@uunet.uu.net
To: info-hams@ucsd.edu

```

```

References <1993Jun8.150551.21417@ke4zv.uucp>, <1v3i3hINN2rr@senator-
bedfellow.MIT.EDU>, <1993Jun9.135548.25689@ke4zv.uucp>
Subject : Re: Field Day Power

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In article <1993Jun9.135548.25689@ke4zv.uucp>, gary@ke4zv.uucp (Gary Coffman) wrote:

Gary, looks like you need more practice...  
Maybe a close third should be people with guns...

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References <1v04a1INNh3f@emx.cc.utexas.edu>, <1v0s7t\$1pb@charm.magnus.acs.ohio-state.edu>, <1993Jun9.093039.2684@walter.cray.com>po  
Reply-To : rcmcc@canis.UUCP (Ron McConnell)  
Subject : Re: ham radios in movies

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References &lt;C8263o.Iy1@srngenprp.sr.hp.com&gt;,

<4JUN199307223413@nssdca.gsfc.nasa.gov>, <1993Jun7.192137.7417@wkuvx1.bitnet>  
Subject : Re: PL-259 seal

> I have had good experiences (zero failures) with two methods. I have  
> used these for 950 mhz with N connectors, and the UHF type. If you  
> want to avoid expensive tower work later, it pays to spend a couple  
> of dollars waterproofing connectors.

>

> method # 1:

>

> This is detailed in the recent edition of the NAB broadcast engineering  
> handbook under the microwave chapter. This is the most widely  
> accepted professional method. If done correctly it is truly waterproof,  
> is virtually UV proof, and is not bad to open up later:

>

> The football wrap: Using butyl rubber tape (supplied in grounding kits  
> by Andrew and seperately), also sold under the trade name "coax-seal" in  
> 1/2 inch widths,

> Wrap from one inch or more behind connector to one inch or more on the  
> other side of the connection using 10% stretch, a liberal amount of  
> butyl tape. With your hand, squeeze and form the "putty" against the  
> connector and line. Finish joint by wrapping with good quality  
> electrical tape, stretching in on, with lots of overlap. Make this  
> outer tape wrap 2-3 layers thick.

> This works well.

>

> method # 2:

> There is a special type of shrink tube available that begins about  
> one inch in diameter, and will shrink down to 25% of its size, while  
> oozing a flexible glue type sealant. This requires a heat gun to evenly  
> heat the tube.

> This works well if you contain the entire affected area in the shrink  
> with margin at the ends. The only drawback to this method is that  
> it is somewhat more difficult to remove; the correct amount of  
> pressure must be used when making a ventral slit, in order to avoid  
> damaging the cable jacket.

Both of the foregoing methods sound excellent, and I'll adopt one or another  
for my next INaccessible connection. However, I'm now 4 successful months into  
an experiment with one quite accessible connector on a 30m dipole: great gobs  
of hot-melt glue forced into the connector from behind.

Cheers & 72!

Jim...K5YUT

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End of Info-Hams Digest V93 #706  
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